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Flanged Tritium Waste Containers (FTWCs) Project Update

11-29-2022

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Project Overview

- Stakeholder engagement, outreach, and collaboration has been extensive throughout all project phases
- Numerous alternatives were considered, and included SME and regulator input and consultation
- All aspects of this operation have been specifically designed to prioritize the protection of our workers, the public, and the environment
- This project is a one-time effort to prepare four (4) unique waste containers for permanent offsite disposal

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Planned Controlled Venting

- Project Purpose: Render FTWCs safe for transport for off-site disposal
 - Proven controlled venting technology successfully used before at LANL's Tritium Facility.
 - Operation is intentionally designed to prevent exceeding release limits.
 - One container at a time will be vented, with conservative hold points throughout the process. Process can be safely paused at any time.
 - Established process for the capture of Tritium/RadNESHAPs.
 - Experienced operations personnel conducting routine operations.
 - Existing, proven equipment used for the operation.
 - Only the minimum activities necessary to prepare the four containers for safe transportation will be performed at Area G.

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Operational Requirements

- Operational Approvals
 - DOE Readiness Review (complete) and Formal Approval
 - EPA R6 RadNESHAPS Authorization per 40CFR61, Subpart H
 - NMED RCRA Temporary Authorization per LANL RCRA HWFP
- Climate Conditions
 - Greater than 40°F (for instrumentation).
 - Weather safe for workers (no excessive winds, no snow or ice).
- Timeline: Venting planned for spring 2023 (late March/April)
 - ~10 days of field operations planned to prepare for transport

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Area G FTWCs

Controlled Venting Operational Sequence

Step 1 – Prepare
the four (4)
unvented FTWCs



FTWC

Step 2 – Install
Controlled
Venting Fixture
on FTWC



Controlled Venting Fixture

Step 3 – Connect
Controlled Venting
Fixture to Capture
System and vent
FTWC



Capture System

Step 4 – Install
Pressure Monitoring
Manifold on FTWC

Safe Configuration

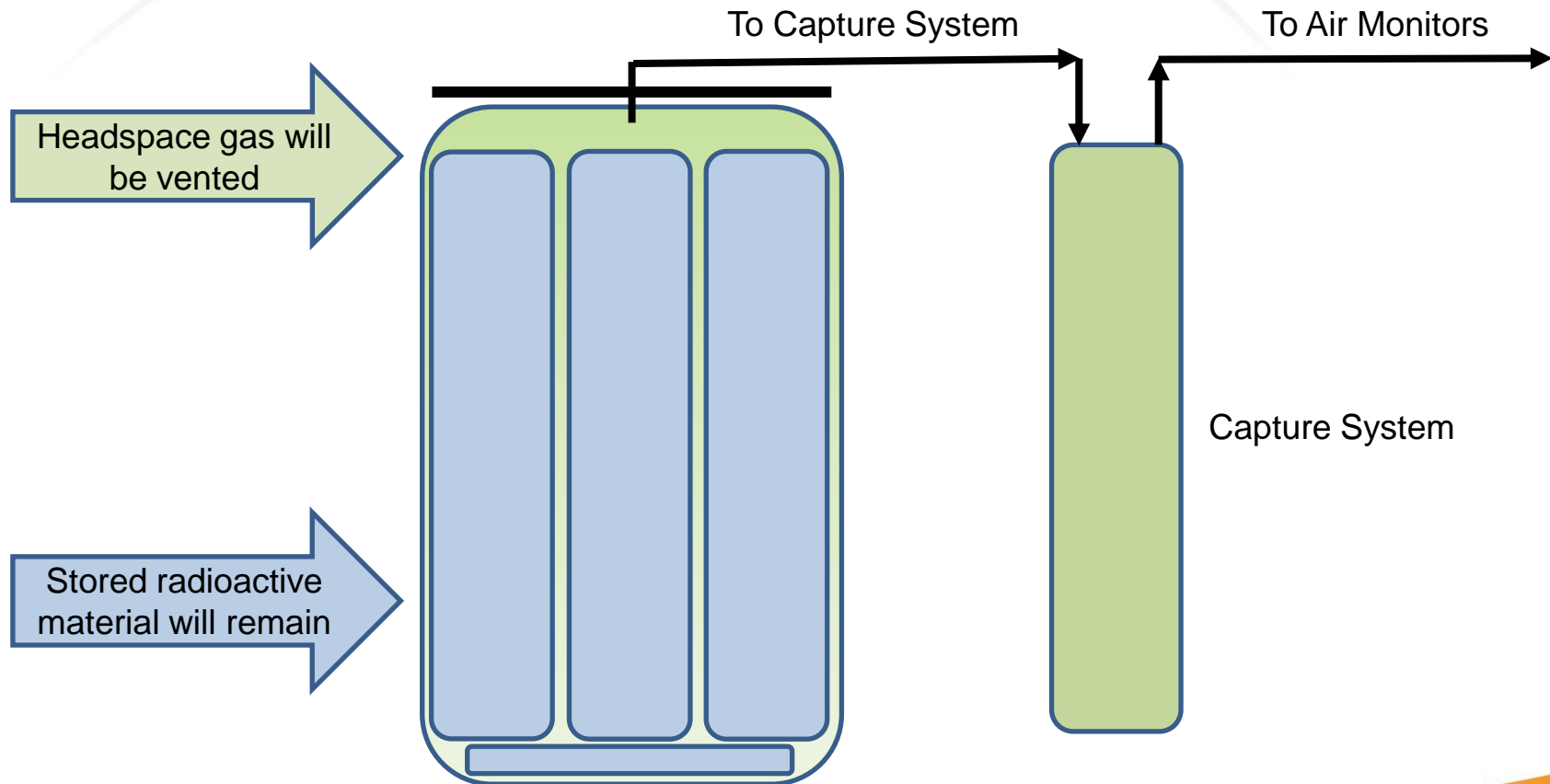


Pressure
Monitoring Manifold

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Area G FTWCs Summary

- This is a one-time project to process and disposition four containers stored at Area G.
- Only the headspace gas will be vented to ensure safe pressure for compliant transportation.
- Multiple layers of controls and conservative modeling will protect the workers and the public.
- Once safe for transport, the containers will be taken to the LANL Tritium Facility for packaging and offsite disposal.



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